

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 61-286978

(43)Date of publication of application : 17.12.1986

(51)Int.Cl.

G06F 15/72

(21)Application number : 60-129376

(71)Applicant : HITACHI LTD

(22)Date of filing : 14.06.1985

(72)Inventor : FURUMURA FUMINOBU  
HONMA KOICHI  
MIZUNO HIROTAKE

## (54) PROCESSING SYSTEM FOR STEREO OBSERVING PICTURE

### (57)Abstract:

**PURPOSE:** To form a topographical map with high accuracy by a satellite picture by making an evaluation function representing a strength difference of picture elements on both stereo pictures and a continuity of a stereoscopic formation of an object to be observed minimum, and obtaining corresponding points on both the pictures.

**CONSTITUTION:** A DTM (geographical numeric model) forming processing program 33 reads a stereo picture data pair of an object from files 30, 31 and performs a mutual corresponding points decision of the respective picture elements and a surface point coordinate calculating processing. Namely, the following processing is performed for respective scanning lines of a left eye picture read from the file 30. At first, on the respective picture elements on the scanning line, by using the track and attitude data, the epipolar curve in a right eye picture read from the file 31 is calculated. Then on the scanning line, the coordinate of the corresponding point of the right eye picture making an evaluation function minimum is obtained and on the obtained respective points, a space coordinate of the corresponding surface points, making visual points of both the left and right pictures an intersecting point is obtained. The above mentioned processings are executed on the respective scanning lines of the left eye picture to obtain a DTM 34.

